#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-008938 Address: 333 Burma Road **Date Inspected:** 16-Sep-2009

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Xu Yumin **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS: Delayed / Cancelled:** Yes No N/A

34-0006 **Bridge No: Component: OBG** Segments

#### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Dan Hernandez was present during the times noted above to observe the fit up, welding and related activities associated with the fabrication of the San Francisco Oakland Bay Self Anchored Suspension Bridge at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

**OBG Trial Assembly Yard** 

Segment 1AAW

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a fillet weld joint. The Weld joint is designated as OBW1-054, 056. The welder is identified as #220063 and was observed welding in the 3F (vertical) position using approved Welding Procedure Specification WPS-B-T-2133.

Segment 5BE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SEG024A-035. The welder is identified as #220063 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-B-P-2212-U2-FCM-1.

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP)

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weld joint. The Weld joint is designated as SEG024B-006. The welder is identified as #220066 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-345-FCAW-2G (2F)-repair-1.

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SEG024B-026. The welder is identified as #220066 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-345-FCAW-3G (3F)-repair-1.

Segment 5CE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as CA023-002. The welder is identified as #220063 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-B-P-2212-U2-FCM-1.

Segment 5BE

This QA Inspector observed heat straightening of the longitudinal diaphragm flange and web between panel points 34 and 35, bike path side using HSR1 (B)-6723.

Segment 2AE

This QA Inspector observed blasting in progress on the interior of the segment.

Segment 1AAE/1AE

This QA Inspector observed ZPMC personnel performing Ultrasonic Testing (UT) of the side plate transverse CJP splice, cross beam side.

Segment 1AW

This QA Inspector observed ZPMC performing Magnetic Particle Testing (MT) on the bottom plate I rib hold back welds after grinding at the 1AW/1BW segment splice.

This QA Inspector observed grinding of cope holes at panel point 10.5, 11.5, cross beam side.

ZPMC Quality Control (QC) Inspector is identified as Chen Bo and Feng Ya Jun. QA Inspector observed QC Inspector verify welding parameters. The welding variables recorded by QC appeared to comply with the Applicable WPS.

Plate Yard

This QA Inspector selected six (6) 460mm x 355mm plate check samples and assigned a QA Lot number to each

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of following sampled material:

Item 699: 20mm A709M-345F2-X, HT# 730155N, Lot# B222-077-09

Samples were marked with Lot number, Item number, material thickness, date and direction of rolling. Samples will be shipped to an Independent Testing lab.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

#### **Summary of Conversations:**

No relevant conversations.

# **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Hernandez,Dan	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer